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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,705	09/08/2000	Horng-Juing Lee	STRM.001US1	3627

36257 7590 07/27/2005

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EXAMINER

DENNISON, JERRY B

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Interview Summary

Application No.

09/658,705

Applicant(s)

LEE, HORNG-JUING

Examiner

Marc D. Thompson

Art Unit

2144

All participants (applicant, applicant's representative, PTO personnel):

(1) Marc D. Thompson (USPTO).

(3) James Hsue (Reg. #29,545).

(2) J. Bret Dennison (USPTO).

(4) \_\_\_\_\_.

Date of Interview: 21 July 2005.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: proposed claims 1, 28, 29, 38, 41, 68, attached.

Identification of prior art discussed: Ong, as currently applied.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

MARC D. THOMPSON  
**MARC THOMPSON**  
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:


- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: All claims allowable over the prior art of record as applied as proposed (see attached) having the provision for the selective caching of particular subblocks (media data titles are composed of blocks (or frames) which are composed of sub-blocks (or partial frames)) at a proxy caching server for transmission to client terminals, in order to lower the amount of information transmitted from the central server thereby lowering bitrate requirements from the central and caching servers when distributing information to client terminals, in combination with the remainder of the limitations set forth in claim 1. The further provision for the incorporation of sampling rates and distribution of media data title information among multiple system servers still using title/blocks/frames/sub-blocks/partial frame paradigm further enhances description of the claimed functionality. Allowance of claims dependent upon further/updated search and exploration of pieces/areas of prior art not already considered.

MARC D. THOMPSON  
  
PRIMARY EXAMINER

**Applicant Initiated Interview Request Form**

Application No.: 09/658,705 First Named Applicant: Hong-Juing LEE  
 Examiner: Jerry Dennison Art Unit: 2143 Status of Application: PENDING

**Tentative Participants:**

(1) Jerry Dennison, Examiner (2) Marc D. Thompson, SPE  
 (3) James Hsue, Atty of record (4) \_\_\_\_\_

Proposed Date of Interview: July 21, 2005 Proposed Time: 1:30 PM (AM/PM)

**Type of Interview Requested:**

(1) ☒ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☒ NO

If yes, provide brief description: \_\_\_\_\_

**Issues To Be Discussed**

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) <u>102e reject.</u>	<u>1, 28, 29,</u>	<u>5,812,662-Ong</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) _____	<u>38, 41, 68,</u>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	<u>78-83</u>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) <u>112 reject.</u>	<u>28</u>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☒ Continuation Sheet Attached

**Brief Description of Arguments to be Presented:**

Disk drive 12 of Ong does not have the capability of a computer system and does not read on the central server computer system of claims 1, 28, 29, 38, 68. Ong does not teach or suggest caching (cont'd on p.2)

An interview was conducted on the above-identified application on \_\_\_\_\_.

**NOTE:** This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

James S. Hsue  
 Applicant/Applicant's Representative Signature

\_\_\_\_\_  
 Examiner/SPE Signature

James S. Hsue

Typed/Printed Name of Applicant or Representative

29,545

Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

SN 09/658,705

Art Unit 2143

**Applicant Initiated Interview Request Form**

sub-blocks that include some but not all sub-blocks in each of the blocks (that are sent sequentially) of at least one media data title (claims 1, 28). Ong also does not teach or suggest caching at the proxy server computer system partial information of video frames that are transmitted sequentially, and combining the cached partial information of video frames with complementary partial information of such video frames from the central server computer system into complete video frames for transmission to clients (claims 29, 38, 41 and 68).

PROPOSED CLAIMS FOR US APPLN. NO. 09/658,705

1. (Currently amended) A method of caching in a system for transmitting a plurality of media data titles to one or more client(s) from a central server computer system and a proxy server computer system located in a computer network environment, said proxy server computer system located in the network between the central server computer system and the one or more client(s), wherein each media data title is divided into blocks to be transmitted to the one or more client(s) in a time sequence, and each block is divided into sub-blocks, comprising:

causing the central server computer system to transmit data in the media data titles to the proxy server computer system via a backbone network connection, and the proxy server computer system to transmit data in the media data titles to one or more client(s) via a local network connection;

identifying which sub-blocks from different blocks of each media data title that are to be cached, wherein the identified sub-blocks include some but not all sub-blocks in each of ~~that are distributed over the~~ blocks of at least one media data title;

caching only the identified sub-blocks at the proxy server computer system to reduce the transmission bit rate of the central server computer system in the network environment for transmitting data in the media data titles to the proxy server computer system; and

combining sub-blocks of a media data title cached at the proxy server computer system with sub-blocks of the media data title not cached at the proxy server computer system and transmitted from the central server to the proxy server computer system through the network, for delivery to the one or more client(s), wherein a peak transmission rate in the backbone network connection for the central server computer system to transmit data in the titles to the proxy server computer system is reduced.

28. (Currently amended) A system for delivering media information; the system comprising:

a plurality of proxy servers computer systems, each servicing a number of terminal devices via a local network connection and receiving a request from one of said

terminal devices when a user of said one of said terminal devices desires for a media title among a plurality of media titles, said media data titles divided into units that are transmitted in a time sequence to one or more of the terminal devices; each of said proxy servers computer systems comprising a cache memory for storing information in units of at least some of the media titles; wherein amount of information in the number of units of each of said at least some media data titles stored and/or replaced in the cache memory is determined by a request frequency to said each of said media data titles; and

a central media server computer system coupled to said proxy servers computer systems ~~vian~~ a backbone connection in a network environment, said proxy servers located in the network between the central server computer system and one or more client(s), wherein the central server computer system transmits data in the media data titles to the proxy servers computer systems, and each of the proxy servers computer systems transmits data in the media data titles to one or more terminal devices client(s);

said central media server computer system having a storage space for storing a plurality of said media data titles and providing data from one or more of said media data titles when receiving a proxy request from one of said proxy servers computer systems, wherein the units of at least one of said media titles containing information cached in the cache memory of said one proxy server computer system are divided into sub-blocks, and wherein the sub-blocks stored in the cache memory of said one proxy server computer system include some but not all sub-blocks in each of the units of said at least one media data titles~~said cache memory of said one proxy server caching only some but not all of the units of said one or more media titles,~~

said one proxy server combining the sub-blocks in cached units with uncached sub-blocks in units received through the network from the central server to form a data stream of complete media data title(s) and transmitting the combined sub-blocks in units of such media data title(s) to one or more client(s) terminal devices, so that the transmission bit rate of the central media server in the backbone connection of the network environment for transmitting data from the at least some media data titles to said one of the proxy servers is reduced.



29. (Currently amended) A system for delivering media information; the system comprising:

a plurality of proxy servers computer systems, each servicing a number of terminal devices and receiving a request from one of said terminal devices when a user of said one of said terminal devices desires a media title from a plurality of media titles; wherein at least one of said proxy server computer systems comprises a cache memory storing a number but not all of units of at least one of said titles; wherein the units of the at least one title stored are distributed over such title; and

a central server computer system coupled to said proxy server computer systems in a network ~~environment~~, said proxy server computer systems located in the network between the central server computer system and one or more client(s), wherein the central server computer system transmits data in the media data titles to the proxy server computer systems, and the proxy server computer systems transmit data in the media data titles to one or more client(s); said central server computer system having a storage space for storing a plurality of said titles and providing data from one of said titles when receiving a proxy request from said at least one of said proxy server computer systems, said cache memory of said at least one proxy server computer system caching only some but not all of the units of said at least one media title, said at least one proxy server computer system combining the cached units with uncached units received through the network from the central server computer system to form a data stream of a complete media title and transmitting such title to one or more client(s), so that the transmission bit rate of the central server computer system in the network ~~environment~~ for transmitting the at least one title to said at least one proxy server computer system is reduced, wherein at least one of said media titles cached includes a video title divided into blocks to be transmitted in a time sequence, and each block is divided into sub-blocks some of which are cached, and the sub-blocks cached comprise partial information of video frames, wherein the video frames are to be transmitted sequentially, and wherein said one proxy server computer system combines the cached partial information of video frames with complementary partial information of such video frames from the central server computer system into complete video frames and sends the complete video frames to terminal devices.

38. (Currently amended) A method of caching in a system for transmitting a plurality of media data titles to one or more client(s) from a central server computer system and a proxy server computer system in a network-~~environment~~, said proxy server computer system located in the network between the central server computer system and the one or more client(s), wherein each title is divided into blocks to be transmitted to the one or more client(s) in a time sequence, and each block is divided into sub-blocks, comprising:

identifying which sub-blocks from different blocks of each title that are to be cached, wherein the identified sub-blocks include sub-blocks that are distributed over the blocks of at least one title;

caching only the identified sub-blocks at the proxy server to reduce the transmission bit rate of the central server in the network ~~environment~~-for transmitting data in the data titles to the proxy server; and

combining sub-blocks of a media data title cached at the proxy server with sub-blocks of the title not cached at the proxy server and transmitted from the central server through the network to the proxy server, for delivery to the one or more client(s), wherein the cached sub-blocks of at least one of said media titles comprise partial information of video frames, wherein the video frames are to be transmitted sequentially, and wherein said one proxy server computer system combines the cached partial information of video frames with complementary partial information of such video frames from the central server computer system into complete video frames and sends the complete video frames to the one or more client(s).

41. (Currently amended) A computer readable storage device embodying a program of instructions executable by a computer to perform a method of caching in a system for transmitting a plurality of media data titles to one or more client(s) from a central server and a proxy server in a network-~~environment~~, said proxy server located in the network between the central server and the one or more client(s), wherein each title is

divided into blocks to be transmitted to the one or more client(s) in a time sequence, and each block is divided into sub-blocks, said method comprising:

identifying which sub-blocks from different blocks of each title that are to be cached, wherein the identified sub-blocks include sub-blocks that are distributed over the blocks of at least one title;

caching the identified sub-blocks under the control of the proxy server to reduce the transmission bit rate of the central server in the network ~~environment~~ for transmitting data in the media data titles to the proxy server; and

combining sub-blocks of a title cached at the proxy server with sub-blocks of the title not cached at the proxy server and transmitted from the central server through the network to the proxy server, wherein the cached sub-blocks of at least one of said media titles comprise partial information of video frames, wherein the video frames are transmitted sequentially for delivery to the one or more client(s), and wherein said one proxy server computer system combines the cached partial information of video frames with complementary partial information of such video frames from the central server computer system into complete video frames and sends the complete video frames to the one or more client(s).

68. (Currently amended) A method for transmitting a program of instructions executable by a computer to perform a process of caching in a system for transmitting a plurality of media data titles to one or more client(s) from a central server computer system and a proxy server computer system in a network ~~environment~~, said proxy server computer system located in the network between the central server computer system and the one or more client(s), wherein each title is divided into blocks to be transmitted to the one or more client(s) in a time sequence, and each block is divided into sub-blocks, said method comprising:

transmitting to a client device a program of instructions; and

enabling the client device to perform, by means of such program, the following process:

identifying which sub-blocks from different blocks of each title that are to be cached, wherein the identified sub-blocks include sub-blocks that are distributed over the blocks of at least one title; and

caching the identified sub-blocks under the control of the proxy server to reduce the transmission bit rate of the central server computer system in the network environment for transmitting data in the media data titles to the proxy server computer system; and

combining sub-blocks of a title cached at the proxy server computer system with sub-blocks of the title not cached at the proxy server computer system and transmitted from the central server computer system through the network to the proxy server computer system, for delivery to the one or more client(s), wherein at least one of said media titles cached includes a title divided into blocks to be transmitted in a time sequence, and each block is divided into sub-blocks some of which are cached, and the cached sub-blocks comprise partial information of video frames, wherein the video frames are to be transmitted sequentially, and wherein said proxy server computer system combines the partial information of video frames with complementary partial information of such video frames from the central server computer system into complete video frames and sends the complete video frames to client(s).

78. (Currently amended) ~~The method of claim 1, further comprising causing the central server to transmit data in the media data titles to the proxy server via a backbone network connection, and the proxy server to transmit data in the media data titles to one or more client(s) via a local network connection;~~

~~wherein a peak transmission rate in the backbone network connection for the central server to transmit data in the titles to the proxy server is reduced.~~

79. (Currently amended) ~~The system of claim 28, wherein the central server transmits data in the media data titles to the proxy servers via a backbone network connection, and each of the proxy servers transmits data in the media data titles to one or more client(s) via a local network connection, and wherein a peak transmission rate in the~~

~~backbone network connection for the central media server to transmit data from the at least some titles is reduced.~~

80. (Currently amended) The system of claim 29, wherein the central server transmits data in the media data titles to the at least one proxy server via a backbone network connection, and the at least one proxy server transmits data in the media data titles to one or more client(s) via a local network connection, and wherein a peak transmission rate in the backbone network connection for the central server to transmit data from the at least some titles to the at least one proxy server is reduced.

81. (Currently amended) The method of claim 38, further comprising causing the central server to transmit data in the data titles to the proxy server via a backbone network connection, and the proxy server to transmit data in the data titles to one or more client(s) via a local network connection; wherein a peak transmission rate in the backbone network connection for the central server to transmit data in the titles to the proxy server is reduced.

82. (Currently amended) The device of claim 41, said method further comprising causing the central server to transmit data in the data titles to the proxy server via a backbone network connection, and the proxy server to transmit data in the data titles to one or more client(s) via a local network connection; wherein a peak transmission rate in the backbone network connection for the central server to transmit data in the titles the proxy server is reduced.

83. (Currently amended) The method of claim 68, further comprising causing the central server to transmit data in the data titles to the proxy server via a backbone network connection, and the proxy server to transmit data in the media data titles to one or more client(s) via a local network connection;

wherein a peak transmission rate in the backbone network connection for the central server to transmit data in the titles to the proxy server is reduced.